CWP-RBC097

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Lower Berryessa Creek Project Calera and Tularcitos Creek Reaches

Santa Clara Valley Water District

Milpitas, California

PREPARED FOR:

WINZLER & KELLY
CONSULTING ENGINEERS

495 Tesconi Circle
Santa Rosa, CA 95041

October 5, 2005

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

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October 5, 2005
1697-4A

Mr. Steve Cox
WINZLER & KELLY
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**RE: PHASE I ENVIRONMENTAL SITE ASSESSMENT
LOWER BERRYESSA CREEK PROJECT,
CALERA CREEK AND TULARCITOS CREEK REACHES
MILPITAS, CALIFORNIA**

Dear Mr. Cox:

As requested, we have performed a Phase I environmental site assessment of the Lower Berryessa Creek Project, Calera Creek and Tularcitos Creek Reaches in Milpitas, California. This report was prepared in accordance with Amendment No.1 dated March 25, 2005 to our agreement dated April 14, 2001. The report titled "Phase I Environmental Site Assessment, Lower Berryessa Creek Project, Calera and Tularcitos Creek Reaches, Santa Clara Valley Water District, Milpitas, California" and dated October 5, 2005 has been prepared by Lowney Associates for the Santa Clara Valley District, as subconsultants to Winzler & Kelly, under the supervision of Leonardo Alvarez, Professional Geologist and Certified Engineering Geologist.

We refer you to the text of the report for details regarding this study. To help us continue to add value to your projects please visit the feedback section on our web site at http://www.Lowney.com/feedback. Your opinion is important to us. Thank you for choosing us to assist you. If you have any questions, please call and we will be glad to discuss them with you.

Very truly yours,

LOWNEY ASSOCIATES

Leonardo Alvarez, P.G., C.E.G.
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Environmental/Geotechnical/Engineering Services

Phase I Environmental
Site Assessment

Lower Berryessa Creek Project
Calera Creek and
Tularcitos Creek Reaches
Santa Clara Valley Water District
Milpitas, California

This report has been prepared for:

Winzler & Kelly

495 Tesconi Circle, Santa Rosa, California 95401

October 5, 2005
Project No. 1697-4A

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
LOWER BERRYESSA CREEK PROJECT
CALERA CREEK
AND
TULARCITOS CREEK REACHES
MILPITAS, CALIFORNIA

1.0 EXECUTIVE SUMMARY

Lowney Associates completed a Phase I Environmental Site Assessment on the Lower Berryessa Creek Project, Calera Creek, and Tularcitos Creek Project. The Calera Creek Reach extends from Manzano Court to Berryessa Creek and the Tularcitos Creek Reach extends from Highway 680 to Berryessa Creek, in Milpitas California (Figure 1). The Phase I assessment encompassed an area approximately 1,000 feet from the centerline of the creeks. This area included the project alignments consisting of the approximately 5,200-foot-long, 75- to 150-foot-wide right of way for Calera Creek alignment and the approximately 3,800-foot-long, 75- to 100-foot-wide right of way for the Tularcitos Creek alignment. The Calera Creek alignment is bordered by Calera Creek to the northeast and Berryessa Creek to the west, in the City of Milpitas. The Tularcitos Creek alignment is bordered by Highway 680 to the east and Berryessa Creek to the south in the City of Milpitas. Both of these alignments are shown on Figure 1. The investigation was completed in accordance with Amendment No.1, dated March 25, 2005 to our Agreement dated April 4, 2001 and was performed to support the Santa Clara Valley Water District's proposed Lower Berryessa Creek project designed to alleviate backwater flow into the tributaries and/or flood protection program on these alignments.

The work was completed in general accordance with ASTM standard E 1527-00 and included a review of existing documentation, a regulatory agency records review, historical review, site reconnaissance, and interviews. The work was performed to evaluate flood protection project alternatives for CEQA purposes.

Lowney understands that the District already owns the property within the creek right-of-way, and that the construction work may extend beyond the District owned property. Although unlikely, flood control improvements may result in property acquisitions along the right of way.

The subject property generally was used for agricultural purposes until the mid 1970s when mainly residential and some commercial development occurred. Industrial areas appeared limited to the adjoining areas at the western end of the Calera Creek alignment, where the area is developed with a cement plant and other light industrial operations.

The Phase I assessment revealed that there are two specific areas of recognized environmental conditions (REC) along the alignment that may have had impacts to soil or ground water along the creeks. However, these areas are not included in the Environment EDR government database reviewed for this project. These two RECs include the Milpitas Materials facility on the north side of Calera Creek at the western end of the alignment, and the Shell Service station near the north side of Tularcitos Creek Reaches at the eastern end of that alignment.

Other potential concerns for the Calera Creek alignment are: an area of bare ground where no vegetation was growing along the southern side of Calera Creek, between the drop structure and Arizona Avenue; the result of non-point sources generated from Milpitas Materials, Hanson Concrete, and Highway 680; the former agricultural land use; and the reported historic practice of spraying banks and roads in the area to reduce vegetation. Storm water run-off may have caused impacts to creek sediment by petroleum hydrocarbons, solvents, metals, or other chemicals generated from Milpitas Materials, Hanson Concrete and Highway 680. The agricultural and historic spraying is a potential concern due to the possible presence of residual pesticides, herbicides and metals in site soil. The concern with the bare ground is the potential presence of pesticides or other compounds that may be inhibiting plant growth.

Lowney understands that the proposed project design is being developed at this time. It is difficult to make specific recommendations for a Phase II soil quality evaluation without knowing the location and extent of areas to be disturbed. On this basis, Lowney recommends that a specific Phase II scope of work be developed after reviewing the proposed project design and that it is submitted as an addendum to this report.

A soil management plan should be prepared using the data generated in this assessment and the proposed Phase II soil quality evaluation. The soil management plan would document the protocol for handling impacted soil, and soil disposal, reuse, or stabilization measures needed depending on the project requirements. Please review the report for the complete details of this assessment.

* * * * * * * * * * * * *

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LOWER BERRYESSA CREEK PROJECT
CALERA CREEK AND
TULARCITOS CREEK REACHES
MILPITAS, CALIFORNIA

2.0 INTRODUCTION

2.1 Purpose

Lowney Associates performed this Phase I Environmental Site Assessment for Winzler & Kelly who is representing the Santa Clara Valley Water District (District). The work was performed to support the District's proposed work to improve the channels and levees along the Calera Creek alignment extending from Manzano Court to Berryessa Creek and along the Tularcitos Creek alignment extending from Highway 680 to Berryessa Creek in Milpitas, California (Figure 1). The exact nature of the proposed work is still being developed at this time but various efforts are being considered including, but not limited to, steepening and reinforcing channel slopes to remain within existing rights-of-way, modifying or constructing new hydraulic conveyance structures, increasing the height of the levees, and other public access and use, landscaping, trail, and recreation improvements. The Santa Clara Valley Water District presently owns the land and new property acquisitions are possible, although unlikely. The exact acreage affected by the project is not known at this time.

The purpose of this study was to document environmental concerns along the creek alignments related to current and historic chemical use, and to evaluate the potential for a release of hazardous materials from on- or off-site sources that could significantly impact soil and/or ground water quality along the alignments.

2.2 Scope of Work

As requested, the scope of work for this study was performed in general accordance with the American Society for Testing and Materials (ASTM) Designation E 1527-00 as outlined in our agreement dated March 25, 2005. The scope of work included the following tasks.

- ▼ Review existing environmental documentation.
- ▼ Review readily available topographic maps and reports to evaluate local hydrogeologic conditions including ground water depth and flow direction.
- ▼ Review a regulatory agency database report to evaluate the potential impact to the site from reported contamination incidents at nearby facilities.
- ▼ Review available regulatory agency files to obtain information about the use and storage of hazardous materials at the site or at nearby facilities.
- ▼ Review readily available documents, maps, and aerial photographs, and conduct interviews with knowledgeable persons to evaluate historical land uses.

- Survey the site and perform drive-by reconnaissance of adjacent properties within 1,000 feet of the creeks to assess for readily observable indications of current or historic activities that have or could significantly impact the site.
- Prepare the Phase I Environmental Site Assessment report including conclusions and recommendations.

Our scope of services did not include sampling or analysis of on-site materials, air, soil, or ground water; in addition, the scope did not include a review of chain of ownership of properties or title reports. The limitations of this Phase I environmental assessment are presented in Section 8; the terms and conditions of our agreement are presented in Appendix A.

3.0 SITE RECONNAISSANCE

3.1 Site Location and Ownership

The project alignment consists of the approximately 5,200-foot-long, 75- to 150-foot-wide right of way for Calera Creek alignment and the approximately 3,800-foot-long, 75- to 100-foot-wide right of way for the Tularcitos Creek alignment. The Calera Creek alignment is bordered by Calera Creek to the northeast and Berryessa Creek to the west, in the City of Milpitas. The Tularcitos Creek alignment is bordered by Highway 680 to the east and Berryessa Creek to the south in the City of Milpitas. Both of these alignments are shown on Figure 1. There are maintenance roads on one or both sides of the creek alignments, with the exception of the westernmost end of the Calera Creek alignment, which has been developed with an approximate 425-foot-long U-shaped concrete channel. The District owns the project alignments, according to assessor parcel maps reviewed at the Santa Clara County Assessor's office. It is our understanding that, although unlikely, new properties may be acquired for this project, depending upon the design requirements for flood control improvements. Since the project is still being designed, the locations and extent of potential new property acquisitions are not known.

The Calera Creek alignment is fenced and developed with dirt maintenance roads that run parallel to the creek, except at the western end as described above, with remaining areas densely vegetated where grasses, brush, and some trees are overgrown on the slopes in the creek areas between the base of the creek and the maintenance roads or property lines. The Tularcitos Creek alignment is also fenced and developed with dirt maintenance roads that run parallel to the creek with remaining areas overgrown with grasses and small plants. At the southern end of the Tularcitos Creek alignment, the banks are lined with concrete from the base of the creek to the road in the area where the creek goes under Paseo Refugio Court to the confluence with Berryessa Creek. Maintenance roads are covered with base rock.

3.2 Topographic Features and Hydrology

Calera Creek and Tularcitos Creek are tributaries to Berryessa Creek, which is a secondary drainage off the Diablo Range and is part of the larger Coyote Creek drainage area. Calera Creek and Tularcitos Creek originate on the northwest slope of the Diablo Range with Calera Creek originating approximately ½-mile south of Monument Peak, and Tularcitos Creek originating approximately 2½ miles south of Monument Peak. Both creeks generally drain southwest through Milpitas and finally converge at separate points with Berryessa Creek.

The project area is generally flat with a slight slope to the southwest along the Calera Creek project alignment and to the west along the Tularcitos Creek alignment. The greater vicinity has a slight slope to the northwest toward San Francisco Bay. The elevation of Calera Creek is approximately 55 feet above Mean Sea Level (MSL) and at Berryessa Creek the elevation is approximately 10 feet above MSL. The elevation of Tularcitos Creek is approximately 25 feet above MSL and at Berryessa Creek the elevation is approximately 20 feet above MSL.

3.3 Hydrogeologic Setting

Based on subsurface exploration recently performed by Lowney Associates (Lowney, 2005) subsurface conditions along the alignment of Calera Creek and Tularcitos Creek are generally similar. The embankment fill along Calera Creek consisted of approximately 1 foot of aggregate base overlying 2 to 3 feet of fat clayey fill apparently derived from the channel excavation. The natural soils below the fill consist of fat clays to depths of approximately 6½ to 10½ feet below the ground surface (bgs) over lean clays with varying amounts of sand and gravel to a depth of 50½ feet bgs, the maximum depth explored.

The embankment fill along Tularcitos Creek consists of 3 to 6 feet of fat clay, also apparently derived from the channel excavation. The natural soils below the fill consisted of fat clay to depths of approximately 6 to 7½ feet bgs overlying lean clays with sand and gravel, as under the Calera Creek alignment, to the maximum depth explored of 50½ feet bgs.

Ground water under Calera Creek historically has been encountered at depths of approximately 5 to 8 feet bgs and under Tularcitos Creek it has been encountered at approximately 6 to9 feet bgs (as per California Geological Survey historic high ground water maps).

Ground water flow direction has been measured to the south at an adjoining property at the west end of the Calera Creek alignment (Lowney Associates 2001) and at the northern end of the Tularcitos Creek alignment (Cambria 2005). Ground water may be locally variable due to the low ground water gradient in the area but in the greater vicinity the flow direction is generally to the northwest, toward San Francisco Bay.

3.4 Site Visit

Our representative, Margo Mackey, an environmental assessor registered with the State of California, visited the site on March 31, April 1, and May 6, 2005. At the time of our site visits, the creeks had low to moderate flow. Both creek alignments are secured with locked cyclone fencing. Several footbridges cross Tularcitos Creek the bridges are owned by the City of Milpitas, according to assessor parcel maps.

The site reconnaissance was performed by walking along the creek alignments via the maintenance roads, except along the western end of Calera Creek from Milpitas Boulevard to the confluence with Berryessa Creek where the creek flows in a U-shaped concrete channel that enters a subgrade culvert beneath railroad tracks until the creek daylights at the confluence with Berryessa Creek. The portion of Calera Creek along the concrete channel was observed from Milpitas Boulevard looking west and from the area east of the railroad tracks looking east.

During the site reconnaissance observations regarding potential environmental concerns were made along the alignment as well as in adjoining areas. Particular attention was made to storm drain outfalls, debris in the creek, and activities at adjoining parcels. An overview of the Calera Creek and Tularcitos Creek alignments, with land use documented on both sides, is presented on Figure 2 and Figure 3, respectively. Photographs of the alignments are presented in Appendix B.

In general, Lowney Associates did not observe significant environmental conditions related to hazardous materials along the alignments. Storm drain outflows did not have obvious staining associated with them, except for the western end of Calera Creek on the northern side of the creek at the storm drain outflow near Milpitas Materials. At that location, a dark colored stain was evident on the concrete wall below the outfall shown as site of concern number 2 on Figure 2. Milpitas Materials was identified as a potential concern during the site vicinity reconnaissance and the records review, and is discussed in Sections 5.0 and 6.0. An area of bare dirt supporting no vegetation was observed on the south side of Calera Creek, south of the maintenance road, between the drop structure and Arizona Avenue.

Minimal amounts of trash were observed and included mainly food packaging debris and one tire. Some pole-mounted transformers were observed within approximately 50 feet of the eastern side of the Calera Creek right-of-way, north of Escuela Parkway. No staining was observed on the poles or on the dirt maintenance roads adjacent to these pole-mounted transformers. No utility markers associated with pipelines or other features were observed in the right-of-way. The Southern Pacific railway crossing did not exhibit obvious staining or other visible impacts at the point where it crosses over the buried portion of Calera Creek.

3.5 Site Vicinity Reconnaissance

To evaluate adjacent land use, Lowney performed a drive-by survey on March 31, April 1, and May 6, 2005. In general, most of the areas surrounding the creek alignments are developed with residences, schools, and office or retail buildings, as shown on Figures 2 and 3. The types of environmental concerns identified are described below and the sites of concern are numbered on Figures and 3.

Calera Creek Vicinity: An industrial area where a cement plant and concrete products are located exists at the western end of the Calera Creek alignment just upstream of the confluence with Berryessa Creek. These properties were identified as sites of concern 2 and 3 on Figure 2 and are discussed in Sections 5.0 and 6.0. The area upstream of this, between Milpitas Boulevard and Arizona Avenue, is developed with residential neighborhoods on both sides of Calera Creek. The area further upstream, between Arizona Avenue and Escuela Parkway, is developed with Milpitas High School and associated athletic fields on the north and a shopping center and a residential neighborhood on the south. Some businesses with hazardous materials placards were observed in the shopping center and were identified as site of concern 4 on Figure 4; the files for those businesses were reviewed at the Milpitas Fire Department and the Santa Clara County Environmental Health Department (see Sections 5.0 and 6.0). Finally, the area between Escuela Parkway and Manzano Court is developed with residential neighborhoods on both sides of the alignment. Further north, athletic fields for Milpitas middle school were observed with the Milpitas School Corporation Yard located beyond. The corporation yard was identified as site of concern 4 on Figure 2, and therefore its file was reviewed at the fire and health departments.

Tularcitos Creek Vicinity: The area at the confluence of Tularcitos Creek and Berryessa Creek is bounded by a residential neighborhood on the east side, a Mervyn's retail store, an office building, and a movie theater on the south side, and a neighborhood park on the west side. There is a subgrade aqueduct, identified as the Hetch Hetchy Aqueduct on assessor parcel maps, that runs parallel and adjacent to the west side of a majority of the creek, until the point where the creek turns to the east. The alignment ends at Highway 680 to the east. The remaining adjoining properties are residential neighborhoods, with the exception of the area north of the upstream limit of the study where an office building, a day care, and a fitness center are located with a Shell service station located beyond. The Shell Service station was identified as site of concern 5 on Figure 3, and the Santa Clara Valley Water District files for this facility were reviewed online (see Section 6.0). Table 1 is a summary of the adjacent properties.

Table 1. Summary of Adjacent Properties

Land Use	Creek Name	Business Name	Direction From Site	Area of Concern
Industrial	Calera	Milpitas Materials	North at west end	Yes #2 on Fig. 2
Industrial	Calera	Hanson Concrete	South at west end	Yes #3 on Fig. 2
Residential	Calera	Single-family homes	North and south sides between Milpitas Blvd. and Arizona Ave.	No
Shopping Center (restaurants, Nob Hill grocery store, nail salon and vacant spaces)	Calera	Hazardous material placards observed at 371, 391, and 473 Jacklin Road	South side between Arizona Avenue and drop structure	Yes #4 on Fig. 2
High school	Calera	Milpitas High School	North side between Arizona Avenue and Escuela Parkway	No
Residential	Calera	Single-family residential	South and southeast side between drop structure to the upstream limit of the study	No
Residential	Calera	Single-family residential	West side between Escuela Parkway to the upstream limit of the study	No
Middle School	Calera	Milpitas Middle School with Milpitas School Maintenance Yard beyond	Northwest of upstream limit	No
Corporation Yard	Calera	Milpitas School Maintenance Yard	Further northwest of upstream limit	Possible #1 on Fig. 2

(continued)

Table 1. Summary of Adjacent Properties
(continued)

Land Use	Creek Name	Business Name	Direction From Site	Area of Concern
Commercial	Tularcitos	Mervyn's, office building, theater	South side of downstream limit of study	No
Aqueduct	Tularcitos	Buried aqueduct	West side from downstream limit to the bend in the creek	No
Residential	Tularcitos	Single-family residential	West side and east side to the upstream limit	No
Commercial	Tularcitos	Hillview Business Center, Day Care Center, and Fitness Center	North side at the upstream limit	No
Service Station	Tularcitos	Shell Service station at 990 Jacklin Road	Further north at the upstream limit	Yes #5 on Fig. 3
Residential	Tularcitos	Single-family residential	East of upstream limit	No

3.6 Interviews

During our study, we contacted Ms. Yousra Tilden, Senior Project Manager with RMC Water and Environment and District-hired Program Manager for the proposed work along these alignments. We also contacted staff at the District for general information regarding past and current site usage. Ms. Tilden was asked to complete a questionnaire, however, the questionnaire had not been returned at the time this report was prepared.

Mr. Scott Katric, Engineering Unit Manager with the District was interviewed on May 4, 2005. He stated that there are no known hazardous material releases or related problems along the creek alignments or known problems relating to hazardous materials usage or releases from adjoining properties. He stated that maintenance roads and cattails are likely sprayed by the District's Vegetation Management Program, but that it is a highly regulated program and should not be of concern. He stated that historically the banks and roads were sprayed to remove vegetation, as that was a standard practice until the District found that vegetation was needed for erosion control along the banks, at which time that practice ceased. Mr. Katric mentioned that is was possible that residual older chemicals could be present as a result of that historic practice. He also stated that storm water from outfall(s) from Highway 680 may impact the creek. Mr. Katrick referred us to Mr. Roger Narsim with the District Water Quality Unit for specific information about known releases on or near the creek alignments.

Mr. Narsim was contacted on May 4, 2005, and was asked if there were known releases of hazardous materials or known contaminants identified by sampling the sediment or surface water along the creek alignments. Mr. Narsim directed District staff to search their emergency response data. It was reported that since July 1, 2000, there has only been one emergency response incident for the creek alignments.

That incident occurred on July 15, 2003 on Calera Creek at Arizona Street when a drum was discovered on the alignment. There was no leak or spill that took place; only the presence of an intact drum that was removed, according to Mr. Dale Jacques, Associate Engineer. A copy of the documentation provided by the District regarding this incident is included in Appendix D.

4.0 HISTORICAL REVIEW

4.1 Photograph and Map Review

To evaluate the site history, Lowney reviewed:

- ▼ Available stereo-paired aerial photographs for 1981, 1974, 1965, 1960, and 1939 from the USGS Library in Menlo Park, California. An aerial photograph dated 2004 was observed online at the USGS Terraserver website.
- ▼ Available USGS 15-minute and 7.5-minute topographic maps from 1980, 1973, 1968, 1961, 1953, and 189 were reviewed at the USGS.
- ▼ Historic Sanborn Fire Insurance maps were requested from EDR. However, no Sanborn maps were available for the project area.

Table 2 summarizes the observations made from the aerial photographs and topographic maps.

Table 2. Historical Summary of the Creek Alignments and Adjacent Properties

Date	Source	Comments
1899	Topographic Map	Calera Creek is shown in a similar configuration as today, except on the western portion where it appears straighter than its current configuration. Structures are not shown on adjoining properties, except on the eastern side of the northern end where a few residential sized structures are depicted. Milpitas Boulevard and railroad tracks are shown crossing the creek at the western end of the alignment. Tularcitos Creek is not shown in its current configuration. An unnamed waterway that is likely Tularcitos Creek is shown at the northern end of the alignment and continues west, unlike the current configuration, which turns south. Adjoining properties are shown with no structures depicted.
1939	Aerial Photograph	Calera Creek is shown in a similar configuration as today, except on the western portion where it appears straighter than its current configuration. Orchards are shown on adjoining properties at the northeast end of the alignment with a few small structures in that vicinity. Remaining adjoining properties are in agricultural use with fields of hay or some type of grass. Milpitas Boulevard and the railroad tracks appear as described on the 1899 map. Tularcitos Creek is not shown and the area of the current Tularcitos Creek alignment and adjoining properties are in agricultural use with fields of hay or some type of grass.

(continued)

Table 2. Historical Summary of the Creek Alignments and Adjacent Properties (continued)

Date	Source	Comments
1953	Topographic Map	Calera Creek is shown in a similar configuration as today, except on the western portion where it is not depicted. Orchards are shown on adjoining properties at the northeast end of the alignment with a few small structures in that vicinity. The aqueduct is shown crossing the alignment at Escuela Parkway. Remaining adjoining properties are shown with no structures depicted. Milpitas Boulevard and the railroad tracks appear as described on the 1939 aerial photograph. Tularcitos Creek is not shown. The aqueduct on the adjoining property to the west is depicted and remaining adjoining properties appear with no structures or roads.
1960	Aerial Photograph	Calera Creek is shown in a similar configuration as today, except on the western portion where it appears straighter than its current configuration. Berryessa Creek is shown at the western end of the alignment in the same configuration as today. Orchards are shown on adjoining properties at the northeast end of the alignment with a few small structures in that vicinity. Remaining adjoining properties are in agricultural use with fields of hay or some type of grass. Milpitas Boulevard and the railroad tracks appear as previously described. Tularcitos Creek is not shown and the area of the current Tularcitos Creek alignment and adjoining properties are in agricultural use with fields of hay or some type of grass. There is distinct line at the location of the aqueduct on the western adjoining property that cuts through the fields and extends to the north.
1961	Topographic Map	Calera Creek is shown in a similar configuration as today, except on the western portion where it appears straighter than current. Berryessa Creek is shown at the western end of the alignment in the same configuration as today. Orchards are shown on adjoining properties at the northeast end of the alignment with a few small structures in that vicinity. The aqueduct is shown crossing the alignment at Escuela Parkway. Remaining adjoining properties are shown with no structures depicted. Milpitas Boulevard and the railroad tracks appear as described on the 1960 aerial photograph and a round structure and rectangular structures are shown at the current location of Milpitas Materials on the western end of the alignment. Tularcitos Creek is not shown. The aqueduct on the adjoining property to the west is depicted and Berryessa Creek is shown at the southern end of the alignment in the same configuration as today. Remaining adjoining properties appear with no structures or roads.

(continued)

Table 2. Historical Summary of the Creek Alignments and Adjacent Properties
(continued)

Date	Source	Comments
1965	Aerial Photograph	Calera Creek is shown in a similar configuration as today, except on the western portion where it appears straighter than its current configuration. Berryessa Creek is shown as previously described. Orchards are shown on adjoining properties at the northeast end of the alignment with a few small structures in that vicinity. Remaining adjoining properties are in agricultural use with fields of hay or some type of grass, except for the adjoining property to the northwest at the northern end of the alignment where some grading is evident and some of the existing school buildings have been constructed. Also, structures are present at the current location of the school maintenance yard to the northwest of the alignment. Milpitas Boulevard and the railroad tracks appear as previously described. Tularcitos Creek is not shown and the area of the current Tularcitos Creek alignment and adjoining properties are in agricultural use with fields of hay or some type of grass. There is a faint line at the location of the aqueduct on the western adjoining property that cuts through the fields and extends to the north. Berryessa Creek is shown as previously described.
1968	Topographic Map	Calera Creek and adjoining properties appear as previously described, except that most of the orchards are no longer depicted to the northeast (one small orchard area remains on the southeast side at the central portion of the alignment). Some residential homes have been developed where orchards were previously located. A structure labeled Russell Jr. High with a track at their current locations to the northwest of the northern end of the alignment. Tularcitos Creek is not shown and adjoining properties appear as previously described.
1973	Topographic Map and Aerial Photograph	Calera Creek and joining properties appear as previously described, except that the area to the northeast is shaded grey, indicating a built-up urban area (residential subdivision) and the current structures at Milpitas High school are present on the northern side of the center of the alignment. Tularcitos Creek is not named but a line in the same configuration as the current alignment is depicted and the creek alignment can be seen in the aerial photograph in the same configuration as today. Adjoining properties appear as previously described, except for property to the northwest, which is shaded grey, indicating a built-up urban area (residential subdivision) and Highway 680 is present to the east in the same configuration as today.

(continued)

Table 2. Historical Summary of the Creek Alignments and Adjacent Properties (continued)

Date	Source	Comments
1980/1981	Topographic Map and Aerial Photograph	Calera Creek appears in the same configuration as today. Adjoining properties appear as they do today, except on the south side of the alignment between Milpitas Boulevard and Escuela Parkway, which is vacant, fallow field/orchard land. Tularcitos Creek appears as previously described and as it does today. Adjoining properties are developed with residential subdivisions on the east and west side of the northern 2/3 of the alignment with remaining areas vacant land. A structure at the current location of the fitness center and service station are present to the north of the alignment.
2004	Aerial Photograph	Calera Creek and adjoining properties appear in the same configurations as today, except for adjoining property north of the alignment at the high school athletic field, which appears as bare dirt. Tularcitos Creek and adjoining properties appear in the same configurations as today.

Copies of the aerial photographs and topographic maps reviewed are presented in Appendix C.

5.0 REVIEW OF EXISTING DOCUMENTATION

To further evaluate the site history, Lowney Associates reviewed and relied on the following environmental document, "Phase I Environmental Site Assessment, Berryessa Creek from Calaveras Boulevard to Lower Penitencia Creek, Milpitas, California," prepared by Lowney Associates for the District and dated July 13, 2001. This Phase I assessment covered the western portion of the Calera Creek alignment and the southern end of the Tularcitos Creek Reaches alignment in the present investigation. In general, the properties of potential concern identified in these vicinities are similar to those identified in the present investigation and included:

- Hanson Concrete Products at One Hanson Court, where two underground gasoline storage tanks were removed from the property sometime between 1988 and 1992. The tanks were located on the east side of the property, closer to Hanson Court than to Berryessa Creek. The actual underground storage tank file was missing from the MFD file so details regarding impacts from the tanks to the subsurface were not available. In reviewing the SCVWD fuel Leak Report and other information in the MFD file, however, it was possible to ascertain that there appeared to be approximately only limited impacts to soil. The case was granted closure from the SCVWD in 1996. Based on the distance of the tank locations from the creek, and the apparent limited impacts to the subsurface, it is unlikely that the creek alignment was affected by fuel releases at this property. There is some potential that surface runoff from the property contains quantities of petroleum hydrocarbons, cement, and other materials generated from day to day activities. These materials would be washed into Calera and Berryessa Creek through the storm drain systems and may concentrate in the stream sediments along with other non-point source pollutants. Non-point source pollutants are discussed further in Section 7.7.

- Milpitas Materials at 1125 N. Milpitas Boulevard, where USTs were present, as well as the removal and mitigation associated with former USTs at the property. Three USTs are currently operated at the property. In 2002, these tanks included two 10,000-gallon diesel tanks and one 8,000-gallon gasoline tank. In addition to fuels, other materials, including paints, acids, solvents, and gases, are stored at the property.

  In 1989, five USTs were removed from the property. These included the following: two 4,000-gallon diesel tanks, two 10,000-gallon diesel tanks, and one 8,000-gallon gasoline tank. The tanks were located in two areas: the gasoline tank was located in the northern area and adjacent to Calera Creek and the diesel tanks were located in the southern area; in both locations, soil and ground water were affected by petroleum hydrocarbons. Ground water flow direction was to the south, toward Calera Creek. Calera Creek is in a concrete- lined channel at that location, and it was concluded that it was unlikely that there were effects to surface water; however, the chance of the plumes migrating beneath Calera Creek to the adjacent Hanson Concrete property was considered high.

  Soil and ground water remediation was implemented until the case was closed by the SCVWD in March 1998. At that time, some benzene exceeding the drinking water standard of 1 microgram per liter (μg/l) still remained in ground water in the northern source area. The SCVWD considered the case to be of low risk because the remaining impacted area was small and there was little chance for human contact with the ground water.

  Although there was a relatively large fuel release at the Milpitas Materials property, the areas of impact were located some distance east of Berryessa Creek. In addition, it was stated that soil and ground water remediation efforts had reduced the size of the impacted area. On this basis, the report concluded that the threat from the source area was unlikely to affect Berryessa Creek. There was some potential that surface runoff from the property could contain quantities of petroleum hydrocarbons, cement, acids and solvents generated from day to day activities. The report stated that these materials could be washed into Calera and Berryessa Creek through the storm drain systems and could concentrate in the stream sediments along with other non-point source pollutants. Non-point source pollutants are discussed further in Section 7.7.

The 2001 Lowney report concluded that there were two specific areas along the Berryessa Creek alignment that may have impacted soil or ground water quality, and both were approximately 1200 feet south of the confluence of Calera Creek and Berryessa Creek. Therefore, due to the distance from the creek alignments, they are not expected to impact the alignments being studied during this assessment.

Other potential impacts to the Berryessa Creek alignment were the result of non-point sources, including storm water runoff and the agricultural land use in the area. The Phase I recommendations excluded concerns associated with stream sediment.

The report described issues to be addressed in a Phase II investigation that included testing soil for pesticides in areas where soil would be excavated, testing soil near where the creek crosses the railroad if it was to be excavated, locating the suspected Standard Oil pipeline, and testing soil adjacent to or immediately downgradient of storm drain outfalls, if that soil would be excavated. In addition, the report recommended that a soil management plan be prepared using data generated from the Phase II investigation.

6.0 REGULATORY RECORDS

6.1 City and County Agencies File Review

6.1.1 Milpitas Fire Department (MFD) File Review and Santa Clara County Environmental Health Department File Review

To obtain information on hazardous materials usage and storage, we reviewed readily available information at the City of Milpitas Fire Department (MFD) and the Santa Clara County Environmental Health Department (SCCEHD) pertaining to the adjacent properties that were identified during the site vicinity reconnaissance as summarized in Table 1. Inspection records for the last two years were not available for review because they are in the process of being electronically copied, according to Ms. Debra Landro with the Milpitas Fire Department. The information made available to us is summarized below. Key documents are included in Appendix D.

Central Pre Cast (aka Hanson Concrete Products)

Central Pre Cast is located at One Hanson Court on the south side of Calera Creek at the west end of the alignment. This file was reviewed because this facility is located immediately south of the creek's U-shaped concrete channel. Records reviewed at the MFD included the most recent copy of the hazardous material inventories and waste inventories. Additional details about the materials used and stored at this facility were discussed in Section 5.0. Based on available information, it appears that the reported release at this facility is not expected to impact the subject creek alignment, but that non-point source run-off from this facility is a concern.

Milpitas Materials

Milpitas Materials is located at 1125 N. Milpitas Boulevard adjacent and north of Calera Creek at the west end of the alignment. This file was reviewed because this facility is located immediately north of and in close proximity to the creek's U-shaped concrete channel. Records reviewed at the MFD included the most recent copy of the hazardous material inventories and waste inventories. Additional details about the materials used and stored at this facility were discussed in Section 5.0. Based on available information, it appears that the 1989 reported release at this facility could be of concern if soil or ground water were to be impacted during the District's proposed project and contaminants were washed to the creek; in addition, non-point source run-off from this facility is a concern.

Wolf Camera

Wolf Camera was located at 391 Jacklin Road in the shopping center south and adjacent to the Calera Creek alignment. This file was reviewed because placards were observed posted outside this facility during the site vicinity reconnaissance. MFD

Inspection Reports on file indicated that this facility had photograph-developing machines from sometime before 1992 to 1994. No reported releases were on file and no reported releases were listed in the government database report for this facility. Drains inside this facility are connected to the sanitary sewer. This former adjoining use is considered to be of low concern.

Dry Clean USA

Dry Clean USA was located at 473 Jacklin Road in the shopping center south and adjacent to the Calera Creek alignment. This file was reviewed because placards were observed posted outside this facility during the site vicinity reconnaissance. MFD Inspection Reports on file indicated that this facility was in operation from 1988 to 2002. This facility was inspected by the Fire Department on a regular basis. No reported releases were on file nor was this facility listed on the government database report. Drains inside this facility are connected to the sanitary sewer. This former adjoining use is considered to be of low concern.

Dental Office

A dental office was located at 371 Jacklin Road in the shopping center south and adjacent to the Calera Creek alignment. This file was reviewed because placards were observed posted outside this facility during the site vicinity reconnaissance. Records indicated that only a dental office was located at this address. No reported releases were on file nor was this facility listed on the government database report. Drains inside this facility are connected to the sanitary sewer. This former adjoining use is considered to be of low concern.

Milpitas Unified School District Corporation Yard

The Milpitas School District Corporation Yard is located at 1585 Roger Street, approximately 650 feet north of the upstream limit of the Calera Creek alignment. This file was reviewed because a fuel island was observed at this facility and placards were posted outside some of the buildings. Extensive records were on file dating from 1967 to the present. An inspection report dated 2002 indicated that they had above ground fuel tanks at the facility and do not have underground storage tanks. A letter dated 1988 from the MFD was on file requesting that steam cleaning no longer be done at this facility due to effluent entering the storm drains. A letter dated 1989 indicated that they had underground fuel tanks that were tested annually and that they had discontinued steam cleaning. A storm water pollution prevention plan dated 1993 was on file that identified diesel, gas, used oil and oil and grease as potential pollutants to storm water at this facility. Storm water discharge test results reported detections of 5 mg/L of oil and grease during two storm events in January 1994 and April 1994, and no detectable concentrations (<5 mg/L) for oil and grease in December 1994 and March 1995. A document dated 1995 from the MFD to the Milpitas School Corporation yard stated that the facility had a filtration reclaim device for the wash water used to wash cars, buses, equipment, etc. A plan dated 1994 showed one ground water monitoring well located next to tanks and the well depth was listed at 153 and the depth to water was listed at 152 (no units provided). Hazardous Material Inventory sheets were copied from the MFD. No reported releases were on file, with the exception of the references to steam cleaning discharges to storm water drains in 1988. In addition, this facility was not listed on the government database report. Because of the distance of this facility from the Calera Creek alignment and because no ongoing reported releases are known, this facility is considered of low concern.

6.1.2 Santa Clara Valley Water District (SCVWD) Online File Review

To obtain information on sites of concern with active cases for reported releases, we reviewed readily available information at the SCVWD's online file review. No adjacent properties were identified as active reported release sites, except for Milpitas Materials, which was described in Sections 5.0 and 6.1.1. Properties that were identified during the site vicinity reconnaissance were summarized in Table 1. The information made available to us is summarized below. Key documents are included in Appendix D.

Shell Oil

The Shell Oil service station is located at 990 Jacklin Road, approximately 650 feet north of the upstream limit of the Tularcitos Creek alignment. This file was reviewed because this is a service station with a reported release on the government database report.

This is an active service station. We reviewed the most recent available quarterly ground water monitoring report for this site titled, "Fourth Quarter 2004 Groundwater. Monitoring Report, Shell-branded Service Station, 990 Jacklin Road, Milpitas, California, Incident #97250022" written by Cambria Environmental Technology, Inc. dated May 5, 2005. According to this report, soil and ground water have been impacted by a gasoline release from this property. Ground water depth ranges between approximately 5 and 11 feet below the ground surface and the flow direction was shown to be to the south, toward Calera Creek during the fourth quarter 2004 monitoring event. There are three on-site ground water monitoring wells and five off-site ground water monitoring wells. Mobile ground water extraction occurred at this facility during the fourth quarter, 2004 due to methyl tertiary butyl ether (MTBE) detections in on-site wells that exceeded historically detected concentrations. Monitoring well MW-8 is located closest to Calera Creek, approximately 320 feet north of the creek at the northern end of the alignment. Ground water analyses detected <2.5 parts per billion (ppb) benzene, 440 ppb MTBE and 67 ppb tertiary butyl alcohol (TBA) in MW-8 during the December 2004 monitoring event. MW-8 is the furthest down-gradient well. Anticipated 1st Quarter 2005 activities were listed as ground water monitoring and weekly mobile ground water extraction events from MW-5. Copies of select documents from this report are included in Appendix D.

The release area is comparatively close to Calera Creek and the extent of the impacted ground water has not been defined, based on available data from SCVWD, although ground water extraction is ongoing. In addition, there is potential that surface runoff from the property contains quantities of petroleum hydrocarbons, motor oils, fluids etc., generated from day to day activities. These materials could be washed into Calera Creek through the storm drain system and may concentrate in the stream sediments along with other non-point source pollutants. Non-point source pollutants are discussed further in Section 7.7.

6.2 Regulatory Agency Database Report

During this study, a regulatory agency database report was obtained from EDR and reviewed to help establish whether contamination incidents have been reported in the site vicinity. A list of the database sources reviewed, a detailed description of the sources, and a radius map indicating the location of the reported facilities relative to the project site are presented in Appendix E.

Except for the Milpitas Materials facility at 1125 N. Milpitas Boulevard and the Shell service station at 990 Jacklin Road, there were no reported nearby hazardous materials spills or releases with a potential to significantly impact the site, as discussed in Sections 5.0 and 6.1. The potential for site impact was evaluated based on information in the database records regarding the type of release, current case status, and distance and direction from the site.

7.0 CONCLUSIONS

7.1 Historical Summary

The Calera Creek and Tularcitos Creek alignments first land use was for agricultural purposes with field crops or orchards through the 1930s, 1940s, 1950s and 1960s. By 1981, Calera Creek appeared in the same configuration as today, and by 1973 Tularcitos Creek was realigned through the residential neighborhoods to its present configuration.

From the mid 1970s, residential and commercial development increased in the area, until its present condition where no agricultural activity remains. Based on the agricultural nature of the area, however, it can be assumed that pesticides and herbicides were applied to the land over the years. In addition, it was reported by District staff that historic vegetative management practices involved the spraying of creek banks and roads to reduce vegetation before erosion control practices using vegetation became the standard practice.

7.2 Agricultural Use

For most of its history the Tularcitos Creek alignment and the western end of the Calera Creek were used for agricultural purposes, with remaining portions of the Calera Creek alignment located adjacent to agricultural properties. As a result, a potential environmental concern is the presence of residual pesticides in the soils. Residual pesticides also may be found within the levee material, since there is a high probability that levee material, where present, was derived from the material excavated from adjacent agricultural parcels. Testing for pesticides and agricultural-related chemicals may need to be performed and proper disposal options evaluated prior to disturbing soil in the immediate vicinity of the creek alignments.

7.3 Chemical Storage and Use

Except for the reported historical practice of spraying the banks and roads of the creek alignments, no documentation regarding past chemical use or storage was reviewed in the available documentation.

In addition, an area with bare ground supporting no vegetation was observed along the southern side of Calera Creek, between the drop structure and Arizona Avenue.

According to Mr. Katrick, a regulated vegetation management program is currently used to control vegetation. However, it is unknown why there was no vegetation growing in this area. If vegetation is not present at this location in the future, then testing for herbicides and other chemicals may be needed prior to disturbing soil in this area.

7.4 Rail Lines

The Calera Creek flows through an underground culvert beneath railroad tracks at the western end of the alignment, before the confluence with Berryessa Creek. Impacted soil along the railroad tracks over the culvert may be present. Based on Lowney's experience with rail lines, assorted chemicals historically may have been used for dust suppression and weed control along the line. Specifically, pesticides have been used for weed control, and oils were used for dust suppression; these oils may have contained metals and PCBs. In addition, petroleum hydrocarbons may have leaked from engines or may have been dumped off the tracks. As a result, impacted soil along the railroad tracks may be present on-site. If soil will be disturbed in the area where the rail lines cross over the culverted reek, soil sampling and laboratory analyses should be performed to assess the potential impacts from petroleum hydrocarbons, pesticides, metals, and PCBs.

7.5 Urban Runoff Pollution Prevention Program

The Urban Runoff Pollution Prevention Program, also called the Non-Point Source Program, was developed in accordance with the requirements of the 1986 San Francisco Bay Basin Water Quality Control Plan to reduce water pollution associated with urban storm water runoff. This program was also designed to fulfill the requirements of the Federal Clean Water Act, which mandated that the EPA develop National Pollution Discharge Elimination system (NPDES) Permit application requirements for various storm water discharges, including those from municipal storm drain systems and construction sites. For properties of 5 acres or greater, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction. Due to the magnitude of this proposed project, it is likely that a SWPPP will need to be completed and approved prior to beginning of construction.

7.6 Non-Point Sources of Pollution

Storm water runs off from the surrounding area and enters the creek alignments directly through storm water outfalls. Non-point sources of runoff generate impacts from contaminants, such as petroleum hydrocarbons, oils, metals, solvents or other materials that may be spilled in the area. The contaminants could collect in the creek sediments downstream from the outfalls. The two concrete plants located at the west end of the Calera Creek alignment (Milpitas Materials and Hanson Concrete) are particularly notable sources of potential non-point sources of pollution. In addition, outfalls from Highway 680 and outfalls on the east end of the Tularcitos Creek Reaches alignment are a potential concern. If soil will be excavated adjacent to storm drain outfalls or immediately down-gradient of them, soil samples should be collected and analyzed for pesticides, petroleum hydrocarbons, and metals.

7.7 Impact of Site Development

Lowney understands that the detailed plan for the proposed project is not completed. Lowney also understands that the District may be acquiring additional properties for this project. Soil excavated during construction must be properly managed. Depending on the specific location of soil excavations, investigations, including soil sampling and laboratory analyses, may need to be performed to develop a management plan to handle excavated soils.

7.8 Potential Environmental Concerns Within the Site Vicinity

Based on reported ground water flow at the Milpitas Materials facility at the west end of the Calera Creek alignment and at the Shell service station at the northern end of the Tularcitos alignment, the ground water flow direction beneath the site is likely to the south. The Milpitas Materials facility and the Shell Service station are listed in the Leaking Underground Storage Tank (LUST) database and are located adjacent to the Calera Creek at Milpitas Materials. Impacts to ground water were reported about 320 feet up-gradient of the northern end of the Tularcitos Creek Reaches alignment. The depth to water was reported to be between 5 and 10 feet below the surface at the nearby Shell site. The potential for impact to the project site is largely dependent on the nature of the release and extent of cleanup efforts. Based on information gathered during this assessment, it appears possible that ground water beneath the creeks may be impacted at these two locations. In addition, non-point source run-off from these facilities is also a concern.

Several facilities in the vicinity were reported as hazardous materials users. If leaks or spills occur at these facilities, contamination could impact the site at other locations not discussed in this report, depending upon the effectiveness of cleanup efforts. Non-point source contaminants may come from these areas, but the transport mechanism for off-site non-point source contaminants drains directly to the green belt area of the creek. The green belt area of the creek is not expected to be disturbed during construction operations.

7.9 General Conclusions

Lowney understands that the District already owns the property within the creeks right-of-way, and that the construction work preferably will be limited to the right-of-way and to areas above the green belt. However, it is possible, although unlikely, that flood control improvements currently being designed may result in additional property acquisitions.

The Phase I assessment revealed that there are two specific areas of recognized environmental conditions (REC) along the alignment that may have had impacts to soil or ground water along the creeks. However, these areas are not on included on the Environment EDR government database reviewed for this project. These two RECs include the Milpitas Materials facility on the north side of Calera Creek at the western end of the alignment, and the Shell Service station near the north side of Tularcitos Creek Reaches at the eastern end of that alignment.
Other potential concerns for the Calera Creek alignment are: an area of bare ground where no vegetation was growing along the southern side of Calera Creek, between the drop structure and Arizona Avenue; the result of non-point sources generated from Milpitas Materials, Hanson Concrete, and Highway 680; the former agricultural land use; and the reported historic practice of spraying banks and roads in the area to

reduce vegetation. Storm water run-off may have caused impacts to creek sediment by petroleum hydrocarbons, solvents, metals, or other chemicals generated from Milpitas Materials, Hanson Concrete and Highway 680. The agricultural and historic spraying is a potential concern due to the possible presence of residual pesticides, herbicides and metals in site soil. The concern with the bare ground is the potential presence of pesticides or other compounds that may be inhibiting plant growth.

7.10 Recommendations

It is difficult to make specific recommendations for Phase II soil quality evaluation without knowing the location and extent of areas to be disturbed. On this basis, Lowney recommends that a specific Phase II scope of work be developed for such areas after reviewing the proposed project design, and that it be submitted as an addendum to this report.

For the purposes of developing Phase II recommendations, concerns associated with stream sediment are excluded.

A soil management plan should be prepared using the data generated in this assessment and the proposed Phase II investigations. The soil management plan would document the protocol for handling impacted soil, as well as soil disposal, reuse, or stabilization measures needed depending on the project requirements.

8.0 LIMITATIONS

As with all site assessments, the extent of information obtained is a function of client demands, time limitations, and budgetary constraints. Our conclusions and recommendations regarding the site are based on readily observable site conditions, review of readily available documents, maps, aerial photographs, and data collected and/or reported by others. Due to poor or inadequate address information, the regulatory agency database report listed several sites that may be inaccurately mapped or could not be mapped; leaks or spills from these or other facilities, if nearby, could impact the site. As directed by you, we are relying on information presented in reports provided to us by you or your representative. We are not responsible for the accuracy of information or data presented by others.

Because publicly available information cannot affirm that a release or spill of hazardous materials has or has not occurred at the site, there is the possibility of on-site contamination. Our conclusions and recommendations in this site assessment are qualified in that no soil, ground water, or air analyses were performed. Sampling and analysis lead to a more reliable assessment of environmental conditions, which often cannot be noted from typical Phase I activities. Should you desire a greater degree of confidence, these samples should be obtained and analyzed to further evaluate environmental conditions.

This report was prepared for the sole use of Winzler & Kelly and the Santa Clara Valley Water District. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location.

9.0 REFERENCES

Cambria Environmental Technology. 2005. Fourth Quarter 2004 Groundwater Monitoring Report, Shell-branded Service Station, 990 Jacklin Road, Milpitas, California. Project Number 247-1590-002. May 5, 2005.

Iwamura, T. 1989. Geology and Groundwater Quality in Wilson, L.D., and Iwamura, T., Standards for the Construction and Destruction of Wells and Other Deep Excavations in Santa Clara County: Santa Clara Valley Water District. San Jose, California.

Lowney Associates. 2001. Phase I Environmental Site Assessment, Berryessa Creek From Calaveras Boulevard to Lower Penitencia Creek, Milpitas, California. Project No. 1697-1. July 13, 2001.

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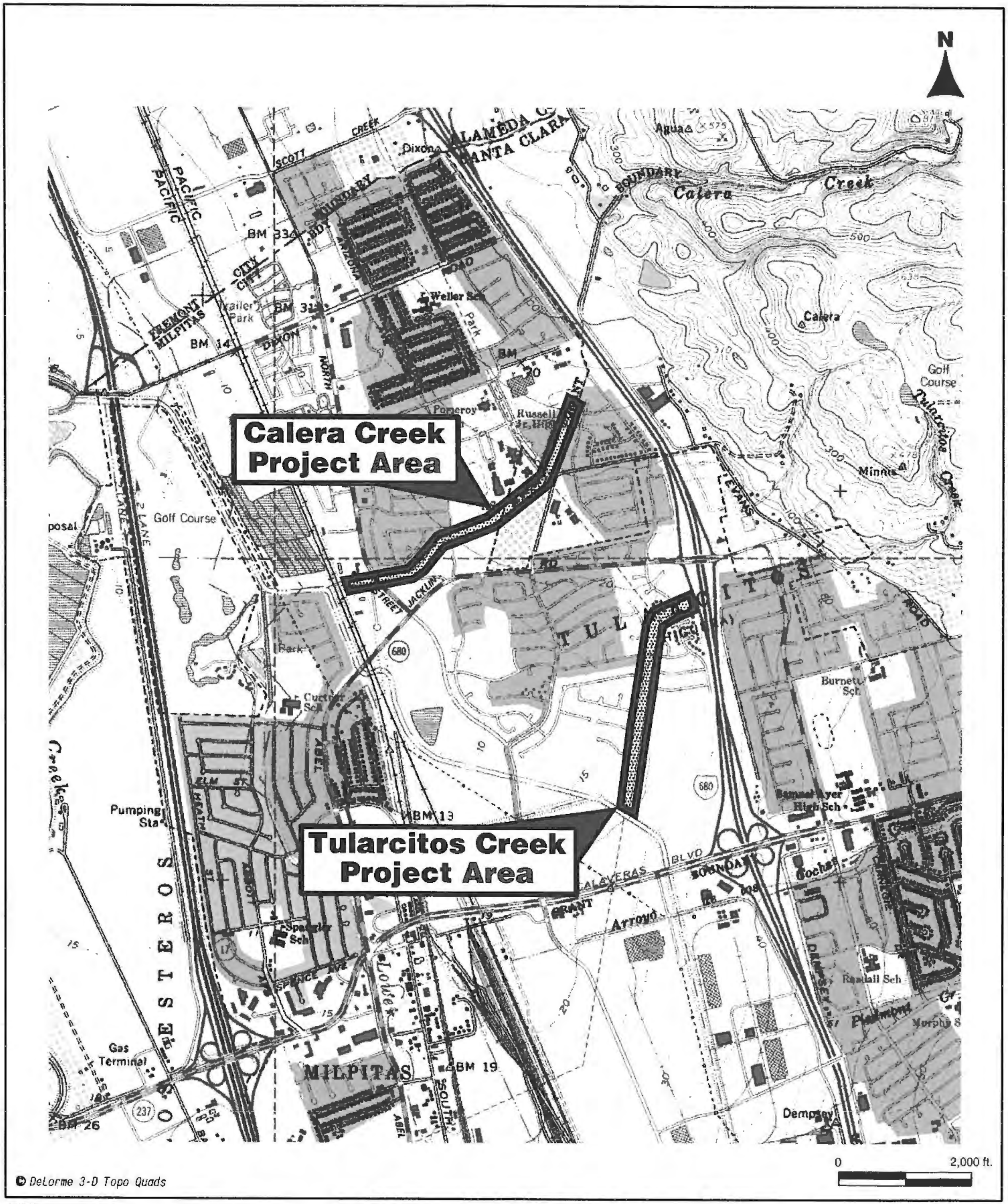

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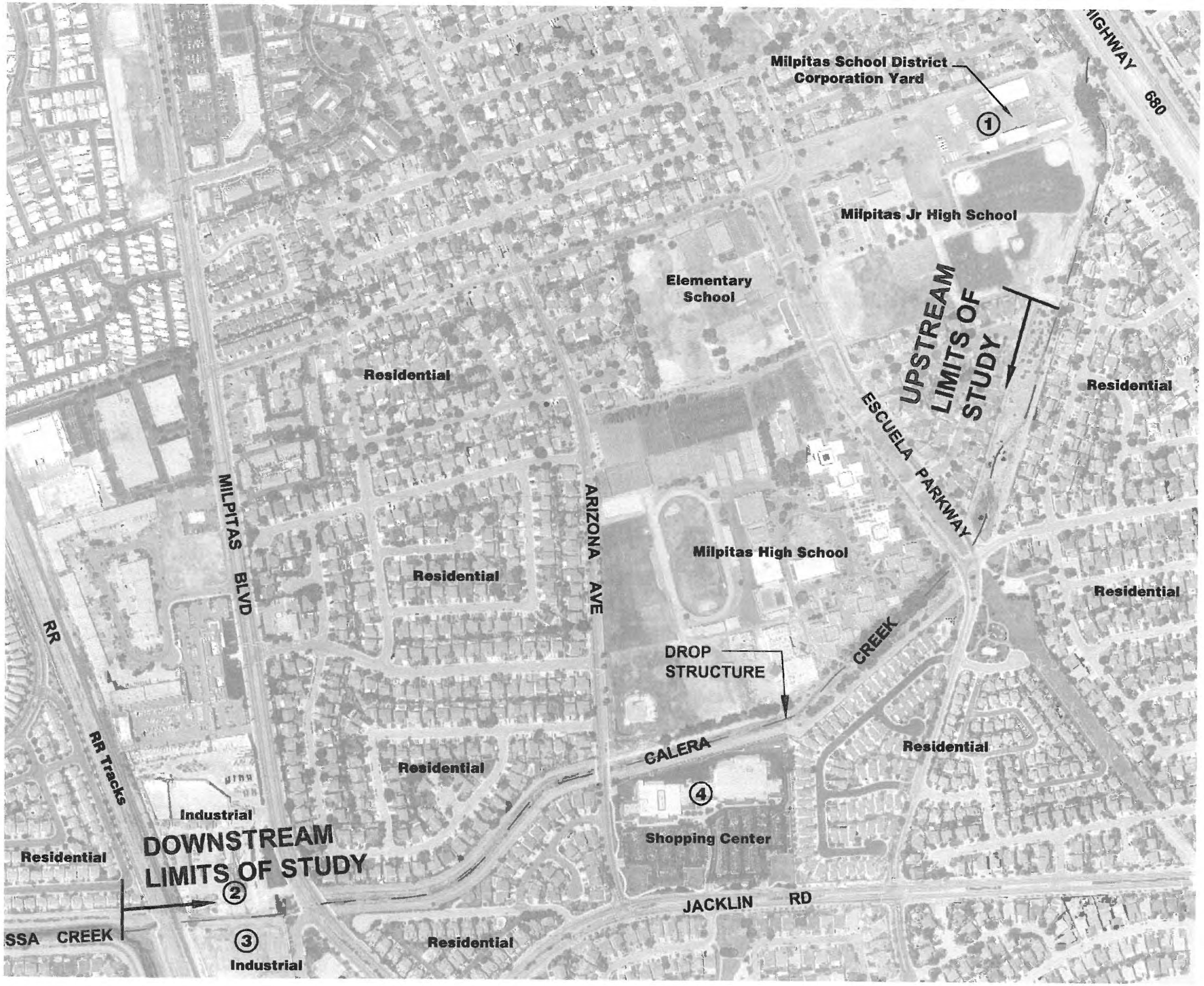
4/05*EB

VICINITY MAP

CALERA AND TULARCITOS CREEK PHASE I ESA
Milpitas, California

LOWNEYASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 1
1697-4A



LEGEND

⑤ - Sites of concern

0 400 ft.

Base by Unknown.

SITE PLAN - CALERA CREEK

CALERA AND TULARCITOS CREEK PHASE I ESA

Milpitas, California

LOWNEYASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 2

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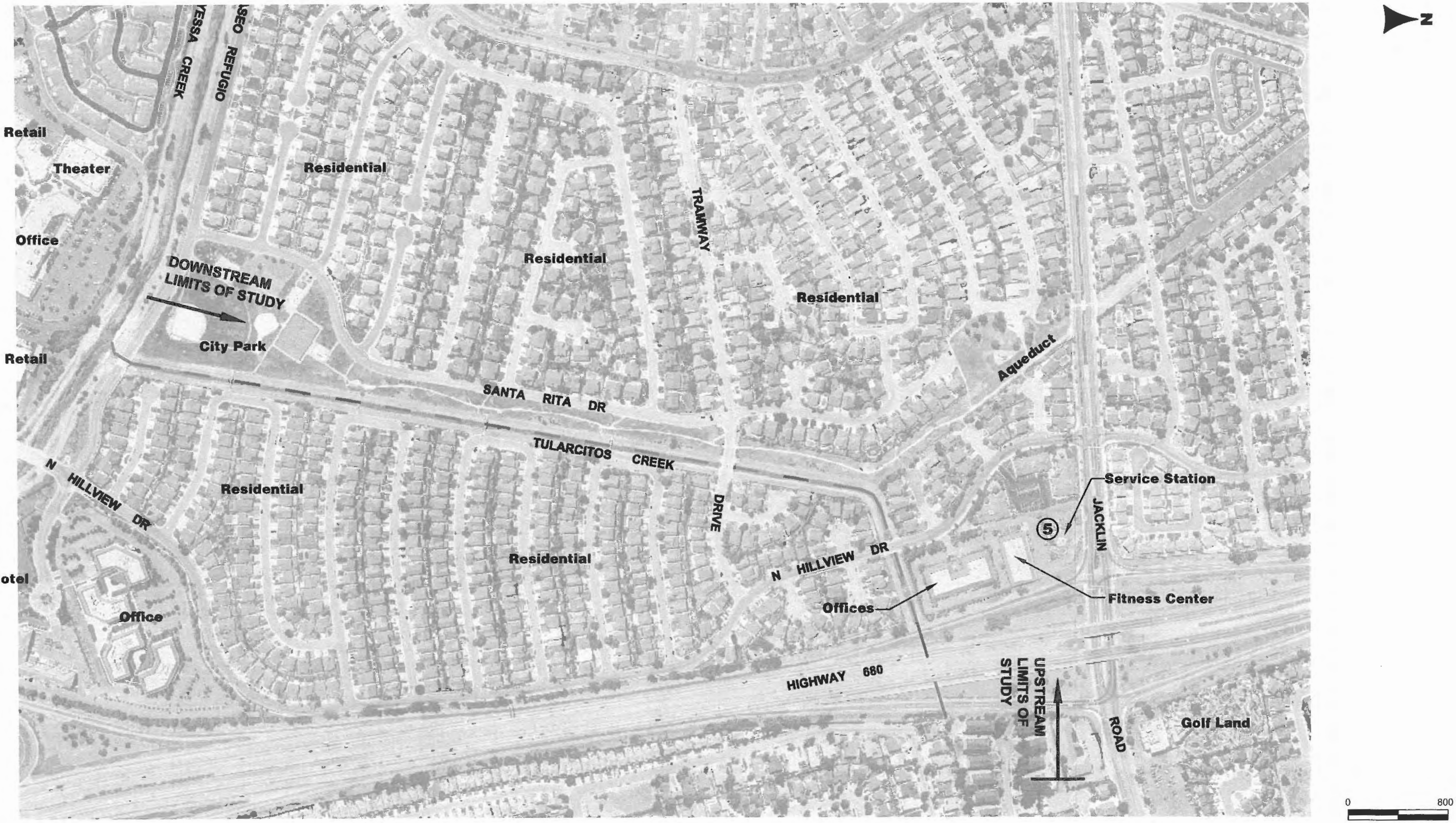

LEGEND

⑤ - Sites of concern

Base by Unknown.

SITE PLAN - TULARCITOS CREEK

CALERA AND TULARCITOS CREEK PHASE I ESA

Milpitas, California

LOWNEYASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 3

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